



**Department of Homeland Security (DHS)**  
**Federal Emergency Management Agency (FEMA)**  
**Mobile Emergency Response Support (MERS)**

## HF VAN



Five FEMA/MERS detachments operate and maintain an HF Communications Van. The HF Vans are located at Bothell, Washington; Denver, Colorado; Denton, Texas; Maynard, Massachusetts, and Thomasville, Georgia.

The HF radio systems can be operated within the van or a remote facility. Connectivity to the remote facility can use a 5 kilometer long double fiber optic Cable or a LOS microwave radio system with 20 mile range, both integrated with the HF Van and trailer. The LOS antenna is raised with a hydraulic telescoping 50' Wilburt mast.

A maximum of 400' X 600' area is required to accommodate three LFH-230/1 Fanlite antennae and one C&S Longshot antenna supporting four HF radio systems, although substitution of a 32' whip, or AS-2259 NVIS or B&W terminated folding dipole antenna can reduce the footprint.

The HF Communication Van has an unrefueled range of 500 miles. Two onboard 20KW generators provide uninterrupted power. The generators use the Freightliner FL60's 90-gallon fuel tanks and last approximately five days between refueling. Two roof air conditioners provide cooling or heating.

The trailer stores reels for fiber optic and coaxial cable, four 50' masts, antennae, radio equipment spares and 16 transit cases for the remote facility equipment and computers.

The cab includes a VHF radio for convoy operations.

## NETWORKS



### **FEMA National Radio System (FNARS)**

FNARS provides resilient voice and messaging communications for command, control, and communications (C-3) and Continuity of Operations (COOP) of FEMA assets, and to coordinate operations with Regional Administrators and state/territorial emergency management partners in response to all-hazard events.

FNARS systems are supported by Mount Weather Emergency Operations Center, Federal Regional Centers (FRC), Regional Offices (RO), the 50 State Emergency Operations Centers (EOC), the District of Columbia EOC, and U.S. Territorial EOCs.

FNARS comprises of two networks: National Radio Net (NRN) and the Regional Radio Networks (RRN). NRN supports C-3 between FEMA Headquarters, ROs, FRCs and COOP sites throughout the United States in degraded communications environments. RRN facilitates communications between FEMA and State/territorial emergency management partners to coordinate disaster response and recovery. There are five FRCs, each serving as net control for a RRN: Maynard, MA; Thomasville, GA; Denton, TX; Denver, CO; and Bothell, WA.

### **Shared Resources (SHARES)**

SHARES is administered by the Department of Homeland Security (DHS). This network supports federal, state and county agencies with a national security and emergency preparedness mission to communicate when landline and cellular communications are unavailable. Over 1,350 SHARES stations use existing HF radios resources to support safety, maintenance of law and order, and public health.

### **State Area Command (STARC)**

STARC is primarily used by the Washington National Guard for intra-state emergency communications between Camp Murray and each Army/Air Force National Guard armory/station.

The HF Communication Van radios can also be programmed to support other networks as directed. Each radio has capacity for 200 channels.



## RADIO SYSTEMS



### Four MICOM RM-125 Receiver/Transmitters

- 100 KHz to 30 MHz frequency range
- 300 Hz to 3300 Hz bandwidth
- Automatic Link Establishment (ALE)  
MIL-STD-188-141B
- 25W to 125W selectable transmit power

### Two HAL DSP-4100 modems

- CLOVER, PACTOR, FSK, RTTY, MT-63

### Remote Facility connectivity using:

- **Premisys IMAC 800 Multiplexer** to provide T-1 extension to the Remote Facility
- **Glenayre Lynx 2xT1 LOS Radio** (2.4 & 5.4 GHz)
- **Larus FT2ER** Fiber Optic line interface unit
- - Inserts audio/digital signals into (DS1)

### Four MICOM Linear Power Amplifiers

- 300W to 1000 Watts selectable
- 48 VDC power supplies

### Four JPS PPS-100 Pre/Post Selector

- permits operation of collocated R/Ts

### MICOM FTN 6074 Antenna Coupler

- Roof mounted whip antenna



### Two diesel Kohler 20K Generators

- 120/208 three phase 70 Amp

### Three Stabline Automatic Voltage Regulators, single phase

- 120V 60Hz, 5KVA

### Two 13,500 BTU Air Conditioner/Heaters



**Remote Facility**

## Four Remote Controlled Radio Systems, each with:

### MICOM Radio Remote Control Units

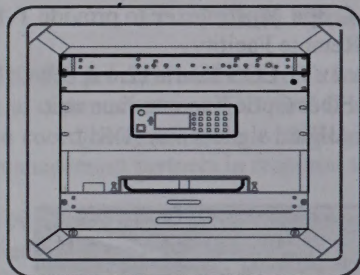
- Full control of all radio functions

### Sunair RTU-200 Radio Telephone Interface

- VOX or Front Panel keyline

### Laptop Computer

- For Text Data Messaging



**One Premisys IMAC 800 Multiplexer** provides voice/data/control T-1 to the HF Van via Fiber Optic or LOS

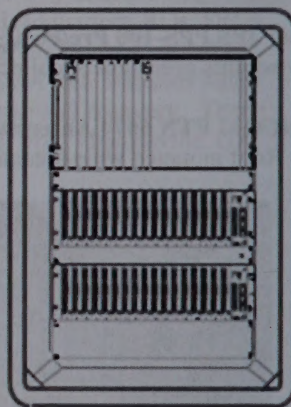
**One Premisys IMAC 800 Multiplexer** provides T-1 telephony interface with Public Switched Telephone Network (PSTN) or Private Branch Exchange (PBX)

**Glenayre Lynx 2xT1 LOS Radio** (2.4 & 5.4 GHz)

**Larus FT2ER Fiber Optic line interface unit**

- Inserts audio/digital signals into (DS1)

**Uninterrupted Power Supply** protection for entire system.



### Four Rockwell Collins Q9604 Modems

- **Waveforms:** MIL-STD-188 A & B & 39 Tone, STANG 4285, 4529, 4539, 4415, 4481 and Programmable FSK
- **Modes:** FSK, PSK, QAM
- **Data Rates:** 50, 75, 150, 300, 600, 1200, 2400, 4800, 6400, 8000, 9600, 12800, 16000, and 19200 bps

